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5. (Three Times Amended) A method of treating a staphylococcal infection associated with a catheter or a prosthetic device, comprising systemically administering to a human suffering from such an infection an effective amount of at least one recombinantly produced lysostaphin analogue;

wherein multiple doses per day of the lysostaphin analogue are administered in an amount of 50 mg/kg or less per dose.

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32. (Amended) The method of Claim 4, further comprising administering a second antimicrobial agent selected from the group consisting of a rifamycin, a glycopeptide and combinations thereof.

41. (Amended) The method of Claim 5, wherein the amount of lysostaphin analogue(s) administered is between 0.5 mg/kg/day and 200 mg/kg/day.

- 42. (Amended) The method of Claim 32, wherein the amount of lysostaphin analogue(s) administered is between 0.5 mg/kg/day and 200 mg/kg/day.
- 43. (Amended) The method of Claim 58, wherein the amount of lysostaphin analogue(s) administered is between 0.5 mg/kg/day and 200 mg/kg/day.
- 44. (Amended) The method of Claim 4, wherein the amount of lysostaphin analogue(s) administered is between 3 mg/kg/day and 50 mg/kg/day.

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- 45. (Amended) The method of Claim 5, wherein the amount of lysostaphin analogue(s) administered is between 3 mg/kg/day and 50 mg/kg/day.
- 46. (Amended) The method of Claim 32, wherein the amount of lysostaphin analogue(s) administered is between 3 mg/kg/day and 50 mg/kg/day.
- 47. (Amended) The method of Claim 58, wherein the amount of lysostaphin analogue(s) administered is between 3 mg/kg/day and 50 mg/kg/day.
- 48. (Amended) The method of Claim 4, wherein the amount of lysostaphin analogue(s) administered is between 3 mg/kg/day and 25 mg/kg/day.

- 49. (Amended) The method of Claim 5, wherein the amount of lysostaphin analogue(s) administered is between 3 mg/kg/day and 25 mg/kg/day.
- 50. (Amended) The method of Claim 32, wherein the amount of lysostaphin analogue(s) administered is between 3 mg/kg/day and 25 mg/kg/day.
- 51. (Amended) The method of Claim 58, wherein the amount of lysostaphin analogue(s) administered is between 3 mg/kg/day and 25 mg/kg/day.
- 52. (Amended) The method of Claim 4, wherein the amount of lysostaphin analogue(s) administered is no more than 45 mg/kg/day.
- 53. (Amended) The method of Claim 5, wherein the amount of lysostaphin analogue(s) administered is no more than 45 mg/kg/day.
- 54. (Amended) The method of Claim 32, wherein the amount of lysostaphin analogue(s) administered is no more than 45 mg/kg/day.
- 55. (Amended) The method of Claim 58, wherein the amount of lysostaphin analogue(s) administered is no more than 45 mg/kg/day.

## Please add the following new claims:

- --56. (New) The method of Claim 32, wherein the at least one lysostaphin analogue is administered simultaneously with the second antimicrobial agent.
- 57. (New) The method of Claim 4, wherein the at least one organ or tissue is a heart valve.
- 58. (New) The method of Claim 5, further comprising administering a second antimicrobial agent selected from the group consisting of a rifamycin, a glycopeptide and combinations thereof.

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